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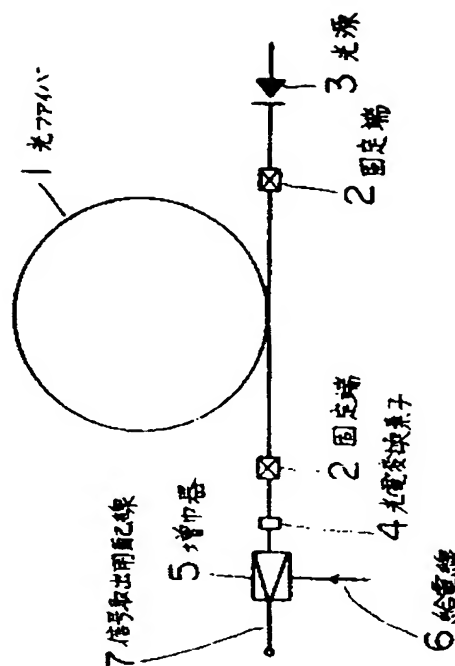
APPLICATION DATE : 10-05-85  
APPLICATION NUMBER : 60099762

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INVENTOR : UESUGI MINORU;

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TITLE : OPTICAL FIBER SENSOR



ABSTRACT : PURPOSE: To prevent the influence of displacement caused by external force, by placing an optical fiber in the shape of a loop or a semi-loop, applying the external force to this loop or semi-loop, and deforming it, and detecting an optical transmission loss generated thereby.

CONSTITUTION: An optical fiber 1 is formed in the shape of a loop, and fixed by a fixing end 2. In such a state, when a light is made incident on the optical fiber 1 by an LED, etc. from a light source 3, its light is supplied to a signal fetching wire 7 through a photoelectric converting element 4 and an amplifier 5. In such a case, when the external force or displacement is applied to the loop of the optical fiber 1, the loop is deformed, a radius of curvature of the loop becomes small, and resulting from it, a loss of passing light in its part increases. As a result, the passing quantity of the light in the original loop, namely, the quantity which is converted to the quantity of electricity by the element 4 is varied before or after the external force or the displacement is applied to the loop, and it is detected and judged as a signal.

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